LIMITED OCCURRENCE INVESTIGATION REPORT – FINAL

Reference Number	CA18/3/2/1542						
Classification	Serious Incident	**Date**	5 April 2026	**Time**	0915Z		
Type of Operation	Private (Part 91)						
Location							
Place of Departure	Lanseria International Airport (FALA), Gauteng Province	Place of Intended Landing	Lanseria International Airport (FALA), Gauteng Province				
Place of Occurrence	On Runway 25 at Lanseria International Airport (FALA), Gauteng Province						
GPS Co-ordinates	Latitude	25° 56' 27" S	Longitude	27° 55' 33" E	Elevation	4 521ft	
Aircraft Information							
Registration	ZS-SNR						
Make; Model; S/N	Piper Seneca; PA-34-200T (Serial Number:34-7970428)						
Damage to Aircraft	Substantial	Total Aircraft Hours	4 921.6				
Pilot-in-command							
Licence Type	Airline Transport Pilot Licence (ATPL)	Gender	Male	Age	68		
Licence Valid	Yes	Total Hours	16 600	Total Hours on Type	250		
Total Hours 30 Days	36	Total Flying on Type Past 90 Days	11				
People On-board	2+0	**Injuries**	0	**Fatalities**	0	**Other (on ground)**	0

What Happened

On Sunday, 5 April 2026, two pilots on-board a Piper Seneca PA-34-200T aircraft registered ZS-SNR took off on a post-maintenance test flight from Lanseria International Airport (FALA) in Gauteng province, with the intention to land back at the same airport. The flight was conducted under visual meteorological conditions (VMC) by day and under the provisions of Part 91 of the Civil Aviation Regulations (CAR) 2011, as amended.

According to the pilots, they conducted a pre-flight inspection and no anomalies were found. The aircraft was refuelled to maximum capacity (128 US gallons). Clear weather conditions prevailed at the time of the flight with wind speed of 4 knots (kts) and clear visibility. The pilots reported that touch-and-go manoeuvres were to be conducted as part of the maintenance test flight. After take-off, the pilots commenced with the post-maintenance procedures. They stated that during the second circuit, they completed the pre-landing checks on downwind leg, confirming the illuminated three green indications for the undercarriage, signalling that it was down and locked. During the landing flare, the throttle was closed. The aircraft's main landing gear touched down first on Runway (RWY) 25, followed by the nose landing gear. As the aircraft rolled on the runway, the nose landing gear collapsed, causing the nose to pitch down. Subsequently, the left and right propeller blades impacted

the ground. The aircraft sustained substantial damage to the nose cone and propeller blades. The pilots were not injured.

Figure 1: The aircraft on Runway 25 after the accident.

During an interview, one of the pilots described the nose landing gear's collapse as slow and gradual after the second touch-and-go landing.

Previous Accident

A review of the aircraft's records revealed that the aircraft was involved in an accident on 25 March 2025, investigated by the Accident and Incident Investigations Division (AIID), reference number CA18/2/3/10562 in which the nose gear collapsed. The investigation determined that the cause of the accident was a leak in the nose gear actuator which caused the landing gear to collapse. The aircraft was undergoing repairs and had not been flown since 25 March 2025 (until the current serious incident flight).

Post-serious Incident

After the (current) serious incident, the aircraft was recovered to the owner's hangar and was examined by the investigating team on 24 April 2026. The examination revealed that all the rivets connecting the actuator mount assembly bracket and the lower drag link mount to the bulkhead at station 49.50 (see Figure 3) were sheared. Consequently, the brackets moved freely up and down against the bulkhead whenever the landing gear was extended.

Figure 2: The loose actuator mount bracket on ZS-SNR.

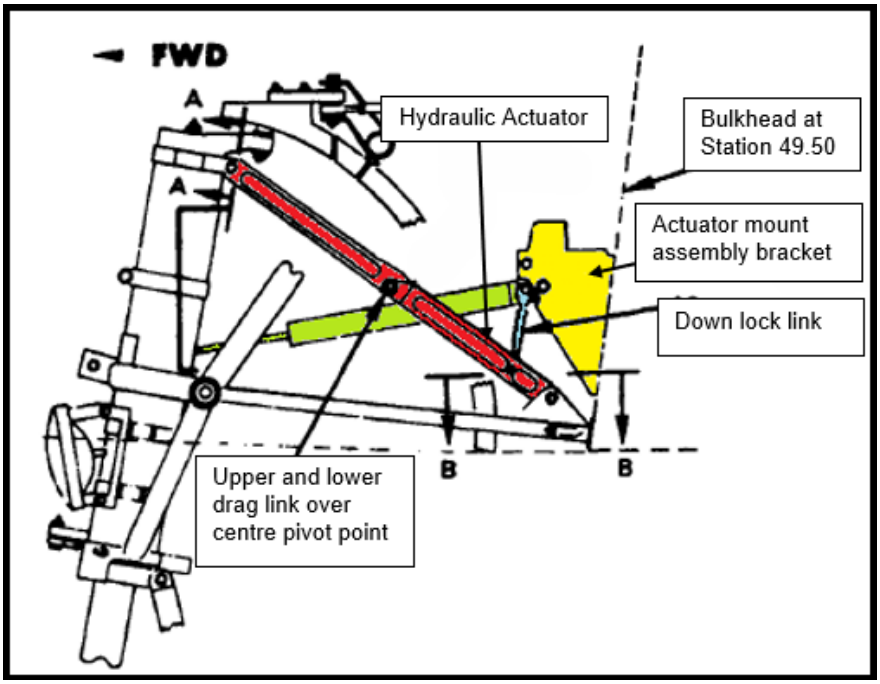

Diagram 1: A side-view illustration of an installed nose gear. (Source: Piper-Seneca II Service Manual)

The inspection of the aircraft also confirmed the following:

- The three green indications which signal down and locked position in the cockpit were functional.
- There was no evidence of hydraulic leak from the actuator and its connections.
- The hydraulic reservoir had enough hydraulic fluid.
- The hydraulic pump was functioning normally.

Actuator Mount Bracket Inspection (Source: Piper Seneca II Service Manual)

In serial numbers 34-7570051 through 34-8170092 (with steel brackets), visually inspect the steel mount bracket for wear, cracks, loose rivets and elongation of the attachment hole for the part number 95061-089 bushing within the next 50 hours and at 100-hour intervals thereafter.

Landing Gear Description and Operation (Source: Piper Seneca II Service Manual)

The PA-34-200T airplane is equipped with a retractable tricycle air-oil strut type landing gear, hydraulically raised or extended by an electrically powered reversible pump. A selector switch in the instrument panel to the left of the control quadrant is used to select the gear UP or DOWN position. Gear positions are indicated by three green lights directly above the selector switch, when the gear is down and locked, and a red light at the tip of the instrument panel when gear is unsafe. Activation of all three down lock switches will shut the hydraulic pump off. When extended, the gear is prevented from collapsing by drag links which are held in an over centre position by a spring-loaded down lock link.

Maintenance Undertaken After the Previous Accident

The operator stated that following the nose landing gear collapse on 25 March 2025, the aircraft manufacturer was not contacted for technical service assistance on any additional maintenance actions that might need to be undertaken to return the aircraft to service.

According to the supplied maintenance records, the following maintenance was accomplished by an approved aircraft maintenance organisation (AMO) to return the aircraft to service:

- The leaking hydraulic pipe on the nose gear actuator was replaced.
- The 50- and 100-hour mandatory periodic inspections (MPI) were conducted. The MPIs included visual inspection of the actuator mount bracket.
- Non-destructive testing using Eddy Current inspection was conducted on the nose gear attachments, and there were no anomalies found.
- The landing gear retraction solenoid and pressure switch were replaced.
- Five successful landing gear extension and retraction cycles with the aircraft on jacks were conducted.

NOTE: *Maintenance was also carried out on various engine, propeller and airframe components, but are not listed as the investigation is focused on the landing gear.*

Certificate of Airworthiness

The operator had applied and paid for the renewal of the Certificate of Airworthiness (C of A) on 2 April 2026 (three days before the serious incident).

Civil Aviation Regulations 2011, Part 21 - Certification Procedures for Products and Parts, Subpart 8 - Certificates of Airworthiness.

Carrying out test flights in certain circumstances
21.08.5 *An aircraft required to be issued with a certificate of airworthiness or requiring its certificate of airworthiness to be rendered effective, may only been test flown with a written permission of its owner or operator provided that—*
(a) such aircraft has been registered in the South African civil aircraft register;
(b) an application form for the issuing or reissuing of a certificate of airworthiness has been lodged with the Director as prescribed in Document SA-CATS 21; and
(c) an appropriate fee as prescribed in Part 187 has been paid for the issue or reissue of a certificate of airworthiness.
(2) Before an aircraft referred in sub regulation (1) is test flown, such aircraft shall be certified safe for the intended flight in an airframe logbook by a holder of a valid, suitably rated AME licence issued in terms of Part 66, or by such person who is a holder of valid certification, on type, issued in terms of Part 145.
(3) A test flight contemplated in subregulation (1) shall make its first landing at a point of its departure.

Findings

1. Personnel Information

1.1. The pilot had an Airline Transport Pilot Licence (ATPL) that was initially issued by the Regulator (SACAA) on 28 May 1984. The licence was reissued on 6 March 2026 with an expiry date of 31 October 2026. The aircraft type was endorsed in his licence.

1.2. The pilot had a Class 1 aviation medical certificate that was issued on 13 March 2026 with an expiry date of 30 September 2026. The pilot had the following restriction listed on his medical certificate: Valid only with correction for defective distant, intermediate and near vision (VML).

2. Aircraft

2.1 The aircraft Certificate of Airworthiness (C of A) was not valid at the time of the flight. The C of A was initially issued on 21 July 2010. The latest C of A had an expiry date of 31 July 2025.

2.2 The aircraft Certificate of Registration (C of R) was issued to the present owner on 3 September 2025.

2.3 The last maintenance inspection of the aircraft was conducted and certified on 27 February 2026 at 4 920.5 airframe hours after which a Certificate of Release to Service (CRS) was issued with an expiry date of 26 February 2027 or at 5 020.5 airframe hours, whichever comes first. The aircraft had a total of 4 921.6 airframe hours at the time of the accident. It had accrued 1.1 hours since the last maintenance inspection.

2.4 The aircraft was involved in a nose gear collapse accident on 25 March 2025 in which the investigation determined that a leak in the nose gear actuator caused the landing gear to collapse. The operator did not contact the manufacturer for technical service assistance on any additional maintenance actions that might be needed before the aircraft is returned to service.

3. Environment

3.1. Clear weather conditions prevailed at the time of the flight; the weather did not contribute to this accident.

4. Sequence of Events

4.1. The previous nose gear collapse likely damaged the actuator mount bracket rivets at fuselage station 49.50. The damage was not detected during the subsequent 100-hour inspection, leaving a latent defect.

4.2. During the maintenance test flight, the weakened rivets likely failed during the second touch-and-go landing, leaving the bracket unsecured and preventing the nose landing gear drag braces from achieving the over-centre locked position during the subsequent gear extension.

4.3. Although the drag braces were not mechanically locked, the down lock switches activated the three green indications in the cockpit and de-energised the hydraulic pump, providing a false indication that the landing gear was safely locked.

4.4. With hydraulic pressure removed and no effective mechanical down lock, the nose landing gear actuator compressed under the aircraft's weight, resulting in the progressive collapse of the nose landing gear during landing.

Probable Cause(s)

Nose landing gear collapsed during the landing roll likely due to failure of the previously damaged actuator mount bracket rivets, resulting in loss of structural integrity, improper gear locking, and a false “down and locked” indication. With no effective mechanical lock or hydraulic support, the landing gear collapsed under load.

Contributing Factor(s)

- Inspection limitations of the recommended visual inspection.
- Failure to consult the manufacturer for advice after the aircraft sustained a structural damage.

Safety Action(s)

Operators and aircraft maintenance organisations are reminded that when an aircraft experiences a structural event not explicitly covered in the maintenance manual, the manufacturer of the aircraft should be contacted for technical advice on the maintenance action required to return the aircraft to service.

Safety Message

Operators and aircraft maintenance organisations are reminded that standard aircraft maintenance procedures prescribed by aircraft manufacturers are not sufficient to return aircraft to service after major structural events.

About this Report

The decision to conduct a limited investigation is based on factors including whether the cause is known and the evidence supporting the cause is clear, the level of safety benefit likely to be obtained from an investigation and that will determine the scope of an investigation. For this occurrence, a limited investigation has been conducted, and the Accident and Incident Investigations Division (AIID) has relied on the information submitted by the affected person/s and organisation/s to compile this limited report. The report has been compiled using information supplied in the initial notification, as well as from follow-up desktop enquiries to bring awareness of potential safety issues to the industry in respect of this occurrence, as well as possible safety action/s that the industry might want to consider in preventing a recurrence of a similar occurrence.

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Purpose

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011 and ICAO Annex 13, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.

Disclaimer

This report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa